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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,157	04/17/2006	Louise Diane Farrand	MERCK-3050	2619

23599 7590 09/13/2006

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
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ARLINGTON, VA 22201

EXAMINER
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WU, SHEAN CHIU

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/543,157

Applicant(s)

FARRAND ET AL.

Examiner

Shean C. Wu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/25/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 9-12, 14 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ono et al. (US 6,495,067).

The reference discloses a liquid crystal composition comprising at least one liquid crystal compound represented by formula (I-1) or (I-2) and at least one compound selected from an alkali metal salt and an alkaline earth metal salt. The reference further teaches that an electrolyte containing at least one liquid crystal compound represented by formula (IA). The electrolyte comprising the liquid crystal molten salt exhibits high charge transporting ability in its liquid crystal state while having a high viscosity and is prevented from reducing the cell performance (see col. 3, line 49 to col. 4, line 59). The solvent used in the reference mixture is disclosed on col. 37, lines 7-45. Also, see col. 39, lines 4-60, which molten salt can contains an imidazolium, particularly see the compound between (F-15) and (F-17), (F-31)-(F-32), (F-39) and (F-41)-(F-44). All these compounds read on the present formula I. Therefore, the reference anticipates the claimed invention.

3. Claims 1-7, 9-12, 14 and 17-20 are rejected under 35 U.S.C. 102(b)/(e) as being anticipated by Ono et al. (EP 1,116,769 or equivalent US 20020034690 or equivalent US 6,727,023).

The reference discloses an ionic liquid crystal monomer comprising at least one polymerizable group. An ionic liquid crystal monomer is a liquid crystal compound having a cation moiety and an anion moiety. An ionic liquid crystal monomer has a so-called mesogen group as a structure, which exhibits liquid crystallinity. The electrolyte comprising a polymer compound obtained by the polymerization of the ionic liquid crystal monomer of the reference can be used as a reaction solvent for chemical reaction or metal plating or can be used for CCD (charge coupled device) camera or various electrochemical cells (so-called cell). The electrolyte composition comprises an imidazolium core represented by formula (V) and ionic liquid crystal monomer (see Summary of the Invention). The reference further discloses that the electrolyte of the can be mixed with a solvent preferably in an amount of up to 50% by weight.

See the last two compounds on page 13, the fourth and fifth compounds on page 14 and first and third compounds on page 15 of EP '769. These compounds read on the claimed formula I.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al. (US 6,495,067).

The claimed anisotropic polymer film and liquid crystal display device are not disclosed in the reference. However, the reference teaches the charge transfer layer comprising the liquid crystal mixture, therefore, it would have been obvious to those skilled in the art to utilize the reference liquid crystal mixture having an anisotropic property in the liquid crystal display device.

#### ***Claim Rejections - 35 USC § 112***

6. Claim 14 provides for the use of a compound, medium, polymer or polymer film, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 14 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

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7. Claims 13-18 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is vague because the “medium” and “polymer” are not part of Claim 1.

8. Please provide the non-patent literature documents cited in pto-1449 to complete the record.

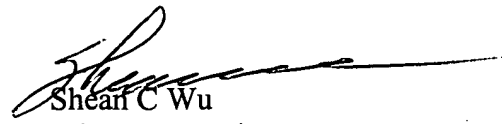
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shean C. Wu whose telephone number is 571-272-1393. The examiner can normally be reached on 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'Shean C Wu', with a long horizontal flourish extending to the right.

Shean C Wu  
Primary Examiner  
Art Unit 1756

scw